Notice

The information in this user`s manual is subject to change without notice.

THE MANUFACTURER OR RESELLER SHALL NOT BE LIABLE FOR ERRORS OR OMISSIONS CONTAINED IN THIS MANUAL AND SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES, WHICH MAY RESULT FROM THE PERFORMANCE OR USE OF THIS MANUAL.

The information in this user`s manual is protected by copyright laws. No part of this manual may be photocopied or reproduced in any form without prior written authorization from the copyright owners.

©Copyright April, 2003
All rights reserved.

Microsoft and Windows are registered trademarks of Microsoft Corporation. DOS, Windows 95/98/ME/ 2000/NT/XP are trademarks of Microsoft Corporation.

Product names mentioned herein may be trademarks and/or registered trademarks of their respective owners/companies.

The software described in this manual is delivered under a license agreement. The software may be used or copied only in accordance with the terms of the agreement.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

TABLE OF CONTENTS

PREFACE

Symbols and Conventions
Protecting Your Notebook - Avoid Abusive Handling and Adverse Environment
Section Summaries

1. GETTING TO KNOW THE BASICS

Performance Features **(1-2,3)**
System at a Glance **(1-4)**
Top View **(1-4,5,6,7)**
Rear View **(1-8,9)**
Bottom View **(1-10,11)**
AC Adapter **(1-12)**
LED Status Indicators **(1-13)**
Function (Hot) Keys **(1-14)**
Windows Keys and Embedded Numeric Key Pad **(1-15)**
Touch Pad With PageUp and PageDown Function **(1-16)**
Display **(1-17)**
Adjusting the Brightness **(1-17)**
Extending the Life of the TFT Display Device **(1-17)**
Opening and Closing the Display Panel **(1-17)**
Graphic Controller **(1-18)**
Multimonitor Support **(1-18)**
Audio Devices **(1-19)**
Adjusting the Volume Manually **(1-19)**
Adjusting the Volume in Windows **(1-19)**
Adjusting the Speaker Volume via the Volume Dial **(1-19)**
Voice Recording **(1-19)**
Modem and Modem Setting **(1-20)**
Network Adapter **(1-21)**

2. BIOS SETUP AND SECURITY

Entering the BIOS Setup Screen **(2-3)**
Leaving the BIOS Setup Screen **(2-3)**
BIOS Action Keys **(2-3)**
Modifying the BIOS Settings **(2-4)**
The Main Menu **(2-4)**

The Standard CMOS Setup **(2-5)**
About Hard Disk Drive Setting **(2-6)**
The Advance CMOS Setup **(2-7)**
The Power Management Setup **(2-8)**
Using Password Protection **(2-9)**
Auto-Detect Hard Disk, Default Settings, Save, Exit **(2-9)**

3. BATTERY POWER AND POWER MANAGEMENT

The Battery Pack **(3-2)**
Lithium-Ion Battery Technology **(3-2)**
Battery-Low Warning **(3-3)**
Installing and Removing the Battery Pack **(3-4,5)**
Charging the Battery and Charging Time **(3-5)**
Checking the Battery Level **(3-6)**
Prolonging the Battery`s Life and Usage Cycles **(3-6)**
Using Windows Power Options **(3-7)**
Power Schemes **(3-7)**
Suspend Modes **(3-8)**
Power Button Action **(3-9)**
Low Battery Warning **(3-10)**
Power Manual Quick Access **(3-11)**

4. UPGRADING YOUR NOTEBOOK

Upgrading the System Memory **(4-2,3,4,5)**
Upgrading the Hard Disk Drive **(4-6,7,8,9)**

5. TROUBLE-SHOOTING

First Step **(5-2,3)**
Audio Problems **(5-4)**
Hard Disk Problems **(5-5,6)**
CD-ROM or DVD-ROM Problems (**5-6)**
Display Problems **(5-7)**
Keyboard and Pointing Device (Mouse) Problems **(5-8)**
CMOS Problems **(5-9)**
Memory Problems **(5-10)**
Modem Problems **(5-11)**

Network Adapter (Ethernet) Problems **(5-12)**
PC Card (PCMCIA) Problems **(5-12,13)**
Performance Problems **(5-13,14)**
Power, Start, and Battery Problems **(5-14)**
Printing Problems **(5-15)**
Firewire (IEEE1394) and USB Problems **(5-15)**

Appendix A Product Specification
Appendix B Agency Regulatory Notices

Preface

Using This Manual

This User`s Manual contains general information about your notebook, hardware and software setup information, troubleshooting, and technical specifications.

Symbols and Conventions

The following conventions and symbols are used in this manual:

- When keys are to be pressed at the same time, a plus (+) symbol is used. For instance, Fn+F7 means holding Fn and F7 keys at the same time.
- The file names are printed in uppercase type. For instance, WELCOME.EXE.
- When a series of clicking actions is needed in Windows O/S, [ ] and > symbols are used. For instance, [Start > Settings > Control Panel > Multimedia] means clicking the Start icon first, then the Settings, then the Control Panel, then the Multimedia icon.
- When you need to make a selection with the touch pad (or mouse), you will be asked to `select` or `click` or `double-click` the item.

Note: Text in this format and symbol means specific instructions, commentary, sidelights, or any additional information or notes that you should be aware of.

Warning: Text is this format and symbol means that failures to comply with the given instructions or information could result in damage to your notebook or could cause bodily harm or loss of life.

Protecting Your Notebook - Avoid Abusive Handling and Adverse Environment

Follow the advice below will help ensure that you get the most out of your Investment.

Your computer will serve you well if you take good care of it.

- *Do not expose the notebook to direct sunlight or place it near sources of heat.*
- *Do not subject it to temperatures below 0°C (32°F) or above 50°C (122°F).*
- *Do not expose the notebook to magnetic fields.*
- *Do not expose the notebook to moisture or rain.*
- *Do not spill water or liquid on the notebook.*
- *Do not subject the computer to adverse shock and vibration.*
- *Do not expose the notebook to dust and dirt.*
- *Do not place objects on top of the notebook to avoid damaging the notebook.*
- *Do not place the notebook on rocky surfaces.*

Here are some ways of taking care of your AC adapter.

- *Do not connect the adapter to any devices other than your notebook.*
- *Do not step on the power cord or place heavy objects on top of it.*
- *Carefully tuck away the power cord and any cables away from pedestrian traffic.*
- *When unplugging the power cord, do not pull on the cord itself but pull on the plug.*
- *Keep the adapter away from children.*
- *The total ampere ratings of the equipment plugged in should not exceed the ampere rating of the cord if you are using an extension cord.*
- *The total current rating of all equipment plugged into a single wall outlet should not exceed the fuse rating.*

Here are some ways of taking care of your battery pack.

- *It is necessary that you charge the battery pack for at least 10 hours before using it for the first time.*
- *Use only factory-original batteries of the same kind as replacements.*
- *Turn off the power or enter suspend mode before removing or replacing batteries.*
- *Do not tamper with the sealed battery pack.*
- *Keep the battery pack away from children.*
- *Dispose of used batteries according to local regulations.*
- *Do not expose the battery pack to fire and recycle them if at all possible.*

When cleaning the notebook, observe these steps:

1. *Power off the notebook and remove the battery pack.*
2. *Disconnect the AC adapter.*
3. *Use a soft cloth dampened with water. Do not use liquid or aerosol cleaners.*

Contact your dealer or see your service technician if any of the following occurs:

- *Notebook has been dropped or the body has been damaged.*
- *Liquid has been spilled into the product.*
- *The notebook does not operate normally.*

Section Summaries

The following is a summary of the available sections and appendices in this manual.

Section 1: Getting to Know the Basics

In this section, you will learn the basic operations and features of your notebook. It gives you a general understanding of the makeup of your notebook.

Section 2: BIOS Setup / Security

In this section, you will learn how to change various firmware settings and what the settings mean. Also, you will learn how to take advantage of the built-in security feature provided by the BIOS.

Section 3: Battery Power / Power Management

In this section, you will learn the fundamentals of power management using Windows built-in power saving features and how to achieve longer battery life.

Section 4: Upgrading Your Notebook

In this section, you will learn how to upgrade the system memory, the hard disk drive, and to install the optional mini-PCI type wireless LAN (802.11b) card.

Section 5: Trouble-Shooting

In this section, you will learn how to solve common hardware and software problems.

Appendix A: Product Specification

In this section, you will find a list of the notebook`s system sepcification.

Appendix B: Agency Regulatory Notices

In this section, you will find the general electro-magnetic and safety regulatory information.

SECTION 1

GETTING TO KNOW THE BASICS

This section introduces the features and components of the notebook computer.

Performance Features

- ***Ultraportable Mobile Office***

  The notebook is both thin and light. It offers the ultimate portability with an array of features to serve your computing needs on the go.

- ***High Performance Processor***

  The notebook is equipped with an Intel P4/ Celeron/ P4-M/ M-Celeron processor on the latest sub-micron Tualatin process. It is powerful yet consumes less energy. The processor also supports up to 533MHz front side bus bandwidth for unparalleled performance.

- ***Advanced Graphic Engine***

  An integrated 4X AGP 2D/3D video processor for high performance graphics. The integrated SiS graphic chip also incorporates a hardware-based motion-compensation engine which gives you smooth MPEG video playback. 3D graphics capability also adds realism to PC games.

- ***Expandability and Swappable Device Bay Convenience***

  The system offers upgradable hard disk drive and 2 SDRAM sockets for expansion, allowing the user to easily increase the storage and system capacities as the need arises.

- ***Large LCD Display***

  The notebook is equipped with a large 14.1-inch TFT XGA display panel for clear text and brilliant colors.

- ***Audio Capability***

  The audio playback function supports 3D audio, 64-voices DirectSound, and uses a hardware-based wave-table.

- ***Communication Features***

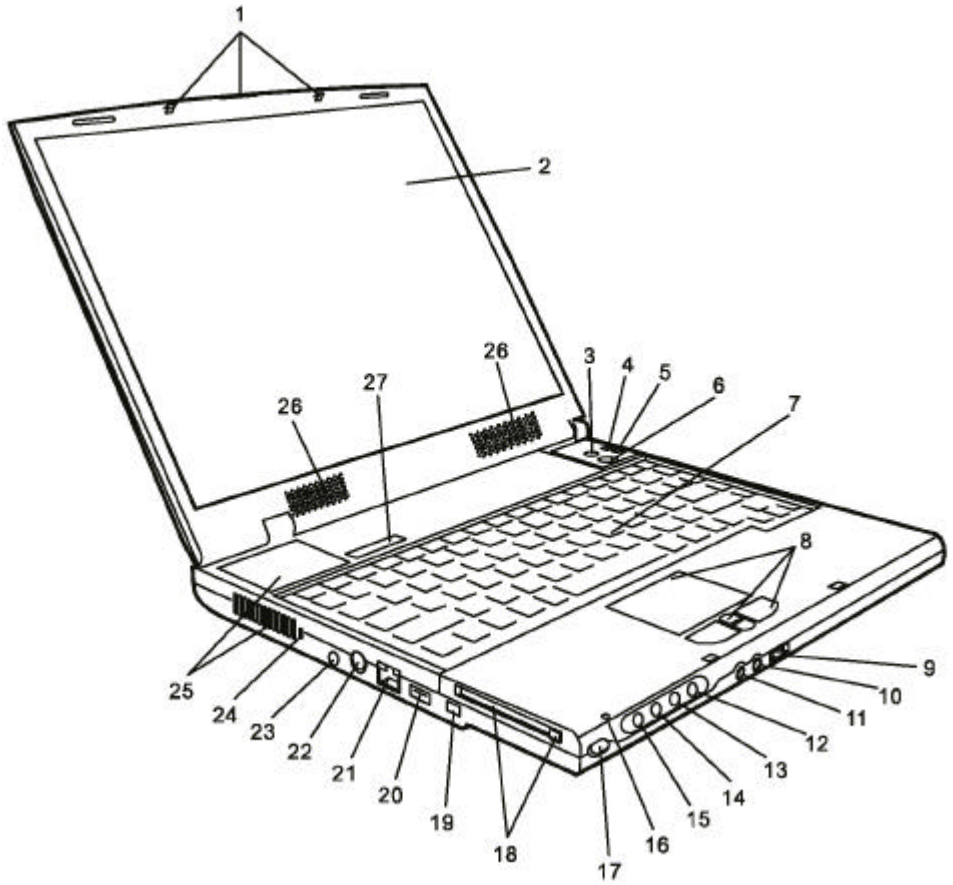
  The system provides built-in Ethernet network adapter for local network and 56K modem for point-to-point connection or dial-up remote network.

- ***Firewire (IEEE1394) and USB ports***

  In addition to a full array of built-in I/O ports, the notebook computer offers IEEE1394 for ultra high speed connection to high bandwidth digial video devices and 3 USB ports to connect to any USB-based peripheral devices.

System at a Glance

Top View



Note:
The Turbo Key will have no effect on models that do not support Intel Speed Step function.

1. **LCD Latch**
   The LCD latches lock / unlock the LCD panel.

2. **LCD Display**
   The panel is where the system content is displayed.

3. **`Turbo` Key**
   The Turbo key disables the Intel Speed-Step function; the processor will perform at its highest frequency.

When system in AC mode, the default setting was disable the “Smart Power” function. If turbo key was pressed then suspend LED indicator will be OFF and enable “Smart Power” in the mean while. When system in battery mode, “Smart Power default setting is enabled. If turbo key was pressed, “Smart Power” changed to disable and suspend LED indicator light.

4. **Suspend LED**

   Flashing green light indicates the notebook is in suspend mode. (See the LED Status Indicator Section for details.)

5. **Charger LED**

   The LED indicates the charging status of the battery pack. (See the LED Status Indicator Section for details.)

6. **Power/Suspend Button with Built-in Power LED**

   The power/suspend button turns the notebook on and off and it also acts as a system suspend key. This notebook uses a one-button design. Press momentarily to turn on the system. Press and hold for at least 3~4 seconds to turn off the system. How this key behaves can be defined in [Start > Settings > Control Panel > Power Options > Advanced] menu. Press the power/suspend button or any key to return from the suspend mode.
   The button has a built-in LED to indicate the system-ON status of the notebook. (See the LED Status Indicator Section for details.)
   While the built-in LED is blinking, it indicates Smart Power working.

7. **Keyboard**

   The enhanced 87/88-key keyboard is used to enter data. It has an embedded numeric keypad and cursor control keys.
   (See Keyboard Section for details.)

8. **Touch Pad with Page Up / Down Function**

   The touch pad is a built-in pointing device with functions similar to a mouse. Use the Page Up or Down key to move one page up or down in Windows applications.

9. **Audio Volume Dial**

   Use the volume dial to control the loudness of the speakers.
   Turn toward the right to increase audio loudness.

10. **Stereo Headphone Jack**

    The stereo headphone jack (3.5-mm diameter) is where you connect the headphones or external speakers.

11. **Microphone Jack**

    The microphone jack (3.5-mm diameter) is where you connect a microphone.

12. **Email Quick Key**

    The `Email Quick Key` launches the MS Outlook Express in Windows XP / 2000. For other Windows O/S, you will need to activate a utility program in the factory CD to make use of the key. (See side-note for Quick Keys installation.)

Note:
To enable the Internet Hot Key, Email Hot Key, Search Key, and My Favorite Hote Key in Windows O/S other than XP /2000, you must install the special Quick Keys application contained in the factory CD-ROM (d:\Utility \ Qkeys \SETUP.EXE). Be sure you already have setup an ISP account and MS Internet Explore.

13. **My Favorite Quick Key**

    The `My Favorite Quick Key` launches any Windows application you designate in the QKey application dialogue box. You will need to activate a utility program in the Utility CD to make use of the hot key for any Windows O/S. (See side-note for Quick Keys installation.)

14. **Search Quick Key**

    The `Search Quick Key` launches the Internet Explore Search Companion in Windows XP / 2000. For other Windows O/S, you will need to activate a utility program in the factory CD to make use of the key. (See side-note for Quick Keys installation.)

15. **Internet Quick Key**

    The `Internet Quick Key` launches the Internet Explore in Windows XP / 2000. For other Windows O/S, you will need to activate a utility program in the Utility CD to make use of the key. (See side-note for Quick Keys installation.)

16. **Built-in Microphone**

    The built-in microphone records sound.

17. **Quick Key Lock Out**

    To prevent accidental pressing of the quick keys, you may slide the button to the right position (locked position) to disable all quick key functions. To reverse lock-out, slide the button toward the left.

18. **PC Card Slot (PCMCIA) and Card Eject Button**

    The slot is where PC Card (PCMCIA) is inserted. Press the eject button to release the PC Card.

19. **Firewire / IEEE1394 Port**

    This is a high-speed data port. You may connect any Fire-wire-ready device to this port.

Note:
For the system running the Windows NT platform, USB function was not supported.

20. **USB Port**

    The Universal Serial Bus (USB) port allows you to connect a wide variety of devices via the USB cable to your notebook at very high data transfer rates of up to 480 Mbps. This port conforms to USB plug-and-play standards.

21. **Ethernet / LAN Port**

    The port connects to a network hub via the RJ-45 cable and also conforms to 10/100Base-TX transmission protocol.

22. **TV (S-Video) Port**

    The S-Video port permits you to redirect the screen output to a television set or any analog video playback device. This TV Port is Macrovision-compliant; when DVD movie is played, the output is scrambled to prevent recording.

23. **Power Jack (DC-in)**

    The DC-out jack of the AC Adapter connects here and powers the notebook.

24. **Kensington Lock Key Hole**

    A Kensington-type security lock latches to this key-hole for anti-theft purpose.

25. **Ventilation Grill**

    The fan grill is where air is drawn to dissipate the internal heat. Do not block this airway completely.

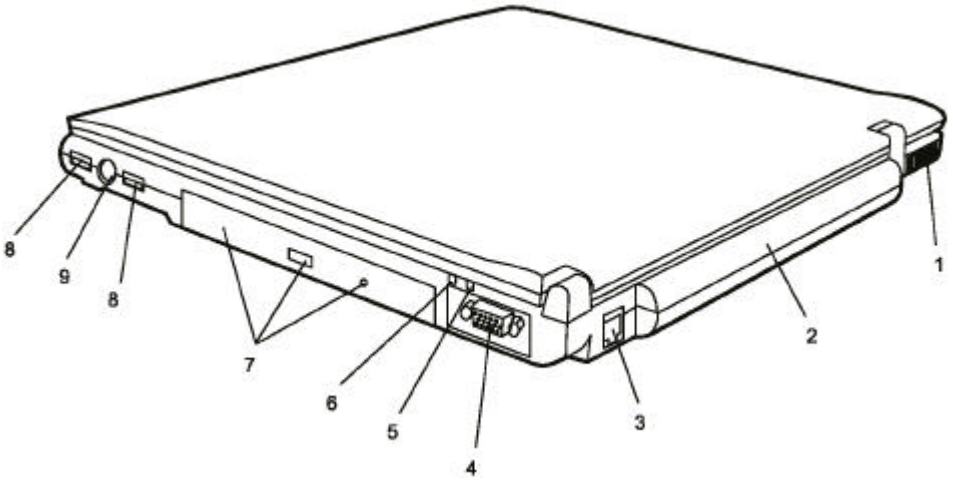
26. **Built-in Stereo Speakers**

    The built-in speakers output the sound in stereo.

27. **LED Status Indicators**

    The LED Status indicators reveal the locking/unlocking of certain key functions and HDD/CD-ROM drive status. (See the LED Status Indicator Section for details.)

Rear View



Warning:
Do not place any heavy objects on the top of notebook. That may damage the display.

1. **Ventilation Grill**
   The fan grill is where hot air is vented off. Do not block this airway completely.

2. **Battery Pack**
   The battery pack is a built-in power source for the notebook.

3. **Modem Port**
   This is where you plug the phone jack (RJ-11) for fax/modem functions.

4. **External VGA Port**
   The 15-pin VGA analog port is for connecting the external CRT monitor or projector.

5. **Suspend LED**
   Flashing green light indicates the notebook is in suspend mode. (See the LED Status Indicator Section for details.)

6. **Charger LED**
   The LED indicates the charging status of the battery pack. (See the LED Status Indicator Section for details.)

7. **CD-ROM (or DVD-ROM or CD-RW or Combo) Drive and Disk Eject Button and manual eject key hole**

   If your notebook comes with DVD-ROM / Combo drive, you may play DVD movies or regular CD-ROM disk. If it comes with CD-RW / Combo drive, you may save data onto a CD-R/ CD-RW disk. Press the eject button to eject the disk tray. The manual eject keyhole allows you to manually eject a jammed disk.

8. **USB Port (x2)**

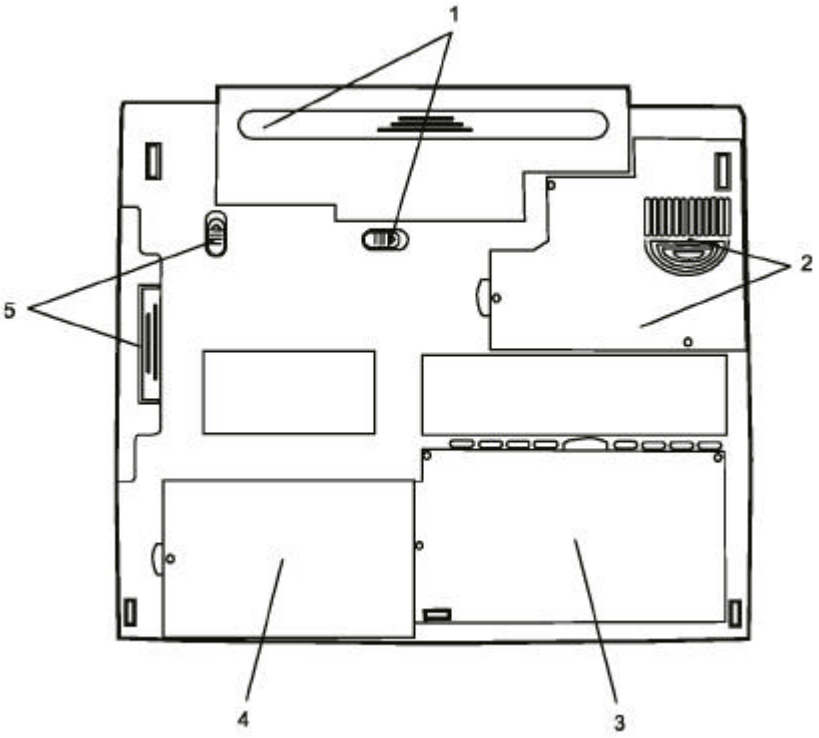
   The Universal Serial Bus (USB) port allows you to connect a wide variety of devices via the USB cable to your notebook at very high data transfer rates of up to 480 Mbps. This port conforms to USB plug-and-play standards.

Note:
For the system running the Windows NT platform, USB function was not supported.

9. **PS/2 Port**

   This is where you connect PS/2-type mouse or keyboard.

Bottom View



1. **Battery Pack and Battery Latch**

   The battery pack is a built-in power source for the notebook. Pull on the battery latch to release the battery pack.

2. **CPU Cover and Ventilation Grills**

   CPU resides underneath the cover. The grills are where air is exchanged in and out of the notebook for internal thermal regulation. Do not block the air-way completely. Do not open the cover as there is no user-upgradable parts inside.

3. **DIMM Sockets**

   DIMM Sockets reside underneath the cover.

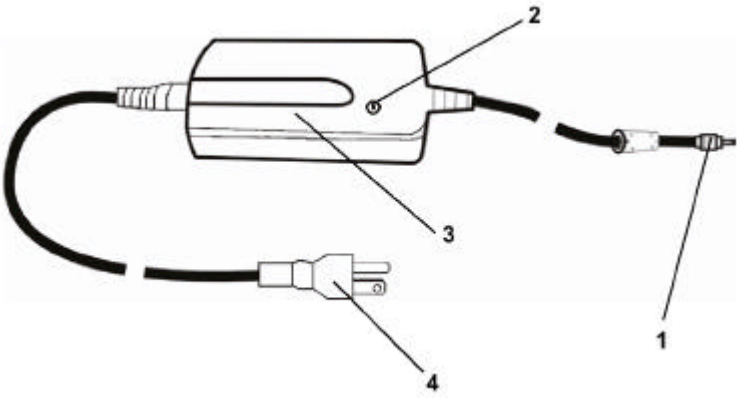
4. **Hard Disk Drive Bay**

   This is where the hard disk drive is located. The hard disk drive stores all the system data. The hard disk drive can be upgraded to a larger capacity.

5. **Swappable Device Bay**

   The optical disk drive normally resides in this bay. Pull on the latch to release the swappable device.

AC Adapter



1. **DC-out Connector**

   The DC-out connector docks to the power jack (DC-in) on the notebook.

2. **LED Lamp**

   The LED lamp appears green when the unit is plugged into a valid AC source.

3. **Adapter**

   The adapter converts alternating current into constant voltage for the notebook PC.

4. **AC Plug**

   The three-prong AC plug plugs to the AC wall outlet.

LED Status Indicators

The LED Status Indicator displays the operating status of your notebook. When a certain function is enabled, an LED will light up. The following section describes its indication.

System Indicators

LED Graphic Symbol	Indication
	Green light indicates the hard drive is being accessed.
	Green light indicates the optical drive is being accessed.
	Green light indicates the embedded numeric keypad is activated.
	Green light indicates the cap-lock is activated.
	Green light indicates the scroll-lock is activated.

Power / Suspend Indicators

LED Graphic Symbol	Indication
	Green light indicates the notebook is ON or is in standby suspend mode. Blinking green light indicates the notebook is in power saving mode, which is able to extend the battery life by proprietary technology Smart Power®.
	Blinking green light indicates the notebook is in suspend mode.

	Blinking red light indicates the battery is being charged. After fully charged, the battery LED indicator will turn off.

KeyBoard Features

Function (Hot) Keys

Graphic Symbol	Action	System Control
	Fn + F1	Enters Suspend Mode.
	Fn + F3	Turns Battery Warning Beep on or off.
	Fn + F4	Changes Display Mode: LCD-only, CRT-only and LCD&CRT.
	Fn + F5	Turns Speaker Volume up.
	Fn + F6	Turns Speaker Volume down.
	Fn + F7	Increases Display Brightness.
	Fn + F8	Decreases Display Brightness.
	Fn + Num Lock	Enables the embedded keypad to work in numeric mode. The keys act like numeric keypads in a calculator. Use this mode when you need to do a lot of numeric data entry. An alternative would be to connect an external numeric keypad.
	Scroll Lock	Press the ScrLk key and then press ↑or ↓ to move one line up or down.

Note:
For various system controls, press the Fn (Function) key and the Fx key simultaneously. The Fn key is located at the left-bottom corner on the keyboard.

Windows Keys

Your keyboard also has two Windows keys:

1. **Start Key**

   This key allows you to pull up the Windows Start Menu at the bottom of the taskbar.

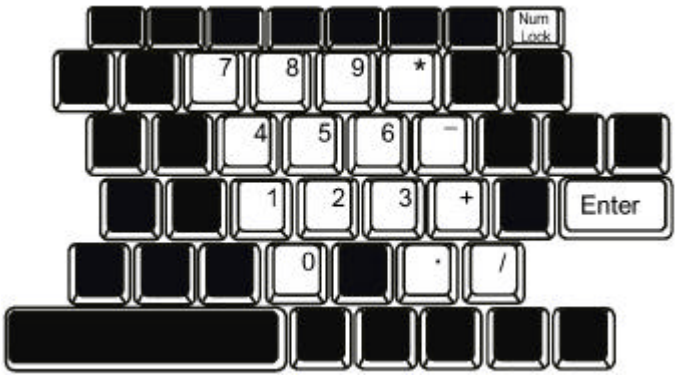
2. **Application Menu Key**

   This key brings up the popup menu for the application, similar to a click of the right mouse button.

Embedded Numeric Key Pad

Press Fn + NumLock to enable the embedded numeric key pad. The numbers are printed in upper right corner of a key, in a color different from the alphabets. This key pad is complete with arithmetic operators (+, -, * , /).

Press Fn+NumLock to revert to normal character keys.



Touch Pad (Glide Pad) with Page Up / Page Down Function

The built-in touch pad, which is a PS/2-compatible pointing device, senses movement on its surface. As you move your fingertip on the surface of the pad, the cursor responds accordingly.

The following items teach you how to use the touch pad:

1. Move your finger across the touch pad to move the cursor.
2. Press buttons to select or execute functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touch pad twice produces is similar to doubleclick the left button of a mouse.
3. Press center Page Up / Down button to move up or down a page in Windows application.

Function	Left Button	Right Button	Page Up / Down Button	Equivalent Tapping Action
Execution	Click twice quickly			Tap twice (at the same speed as double-clicking the mouse button)
Selection	Click once			Tap once
Drag	Click and hold to drag the cursor			Tap twice quickly and on the second tap hold finger to the touch pad to drag the cursor
Access Context Menu		Click once		
Move One Page Up or Down			Click upper portion to move up a page Click lower portion to move down	

Tips on Using the Touch Pad:

1. The double-click speed is timed. If you double-click too slowly, your notebook responds as if you single-clicked twice.
2. Keep your fingers dry and clean when using the touch pad. Also keep the surface of touch pad clean and dry to prolong its life.
3. The touch pad is sensitive to finger movements. Hence, the lighter the touch, the better the response. Heavy touch does not produce better response.

Display

Your notebook uses a high performance 14.1-inch active matrix TFT panel which supports high XGA resolution and multi-million colors for comfortable viewing.

Adjusting the Display Brightness

Note: To maximize your battery operating time, set the brightness to the lowest comfortable setting, so that the internal back-light uses less power.

The notebook uses special key combinations, called hot keys, to control brightness.

Press Fn+F7 to increase the brightness.
Press Fn+F8 to decrease the brightness.

Extending the Life of the TFT Display Device

Observe the following guidelines to maximize the life of the backlight in the display.

1. Set the brightness to the lowest comfortable setting (Fn+F8).
2. When working at your desk, connect your notebook to an external monitor and disable the internal display Fn+ F4.
3. Do not disable the suspend time-outs.
4. If you are using AC power and have no external monitor attached, change to suspend mode when not in use.

Warning: To avoid damaging the display, do not slam it when closing. Do not place any object on top of the computer when the display is closed.

Opening and Closing the Display Panel

To open the display, slide the LCD latch to the right and lift up the lid. Then tilt it to a comfortable viewing position.

To close the display cover, fold it down gently until the LCD latches click into place.

Graphic Controller

This notebook comes with an integrated AGP-bus SiS video graphics accelerator based on a share memory architecture (ie. a portion of the system memory is allocated for graphic engine' s use.) Depending on the total system memory installed, up to 64MB can be allocated as graphic frame buffer. More memory to the graphic subsystem means higher graphic performance; however, as it decreases system memory capacity, overall system performance may suffer.

Multi-monitor Support

The notebook' s display and multimedia capabilities are great for giving presentations. If you prefer, you can also connect an external monitor when giving presentations. This notebook supports LCD and CRT displays in Mirror mode or Multi-monitor Mode.

In the Mirror mode, both displays show the same content.

In the Multi-monitor mode, the system allows you to open and work on different applications independently across two display devices (ie. the built-in LCD display and external display.)

To enable Multimonitor function, do the following:

Connect an external CRT or projector to the notebook first and restart the system. After boot-up, right-click the SiS icon on the task tray. Select Display Property and then Display Setting. You will see the Driver Mode Setting dialogue box.

In the Driver Mode pull-down menu, select Multi-monitor. The system will then ask you to reboot for the function to take place.

Audio Devices

Your notebook' s Audio is Sound Blaster Pro-compatible.

Adjusting the Volume Manually

To increase the volume, press Fn+ F5.
To decrease the volume, press Fn+F6.

Adjusting the Volume in Windows

1. Click the speaker symbol in the taskbar in Windows.
2. Drag the volume control bar up or down to adjust the volume.
3. To temporarily silence the speaker without changing the volume setting, click Mute.

Adjusting the Speaker Volume Using the Volume Dial

Rotate the Volume Dial (located to the front side of the notebook) to adjust the speaker volume.

Turn to the right to increase loudness.
Turn to the left to decrease loudness.

Voice Recording

You need to use audio processing software to enable the built-in microphone. For example, you may use Microsoft Sound Recorder.

When you begin voice recording using the notebook' s built-in microphone, be sure that your mouth is within near distance (no longer than 20~30 cm) to the microphone. If the record level is too small, you may also increase the microphone gain via the volume control panel in Windows.

Modem

Your notebook comes with a 56K V.90 internal fax/modem and a phone jack (RJ-11), which is located on the front side of your notebook computer.
Use a telephone cable to connect the notebook to the telephone wall outlet.

Note:
Some Windows versions do not support fax function. To enable this function, please install a fax communication software on your PC.

Connecting the Modem

1. Plug one end of the phone line into the modem port located on the rear side of the notebook.
2. Plug the other end of the line into the analog phone wall outlet.

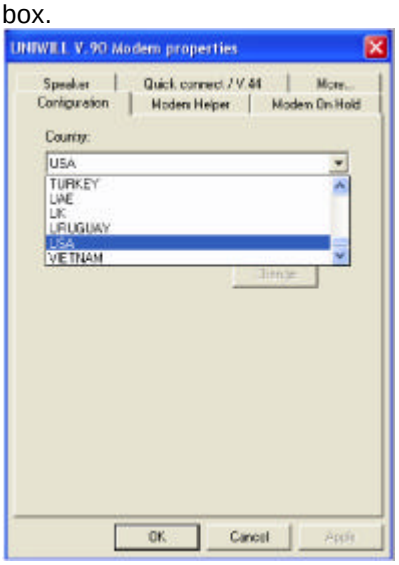
Modem Setting

Depending on where your computer is used, you may need to change settings in the modem. Correct setting will allow you to maintain a stable connection in a country where its telecommunication system may be different to others.

Warning:
The internal modem is intended for use on an analog phone line, also called a POTS (Plain Old Telephone Service) line. This modem cannot be connected directly to a digital telephone line, such as those commonly found in a business office. You may either obtain an analog line or an analog converter compatible with the phone line you're using.

To change the modem setting, do the following:

1. Go to [Start > Settings > Control Panel] and double-click on Modem Settings icon. You will see a similar dialog box.



2. Click on the pull-down menu and select the country where it is applicable. Click on OK to exit.

Network Adapter

Your notebook is equipped with a 10/100Base-TX Ethernet network adapter. Connecting the active LAN cable to the RJ-45 LAN port located on the left side of the notebook. This allows you to access and transmit data in the local area network.

Connecting to the Network

Use Unshielded Twisted Pair (UTP) Ethernet cable only.

1. Insert one end of the UTP cable into the network connector until the connector snaps securely into the receptacle.
2. Either connect the other end of the cable to an RJ-45 jack wall outlet or to an RJ-45 port on a UTP concentrator or hub in the network.

Cabling Restriction for Networks

The following restrictions should be observed for 100BASE-TX networks:

- The maximum cable run length is 100 meters (m) (328 feet [ft]).
- For 100-Mbps operation, use Category 5 wiring and connections.

Consult Windows manual and / or Novell Netware user' s guide for the software installation, configuration, operation of the network.

SECTION 2

BIOS SETUP AND SECURITY

In this section, you will learn how to enter the BIOS Setup Menu and manipulate various hardware control settings. You will also learn how to use the built-in security features.

The Setup Utility is a hardware configuration program built into your notebook's BIOS (Basic Input/Ouput System). It runs and maintains a variety of hardware functions. It is a menu-driven software, which allows you to easily configure and change the settings.

The BIOS contains manufacture's default settings for the notebook`s standard operations. However, there are occasions when you may be required to modify the default settings in the BIOS. For example, you may need to configure the BIOS power management (APM) settings if you are using DOS, Windows 3.1, or non-Windows operating system or to modify the amount of share memory for your graphic subsystem.

The BIOS allows you to set up passwords to limit access to users. This is an important feature because a great deal of vital information is carried within the notebook nowadays. Unauthorized access can be prevented. Later in this chapter, you will learn how to use this security feature.

Entering the BIOS Setup Screen

Note: You may need to press DEL key fairly quickly. Once the system begins to load Windows, you may have to retry by cycle-power on again.

First turn on the power. When the BIOS is performing the POST (Power-On Self Test), press DEL key to activate the AMIBIOS Setup Utility. Press DEL when you see the prompt `*Press DEL to enter SETUP*`.

Leaving the BIOS Setup Screen

When you have finished modifying the BIOS settings, exit the BIOS. It takes a few seconds to record changes in the CMOS.

BIOS Action Keys

Note: Under certain settings, the fields are grayed out. Grayed out fields are not changeable.

Function Key	Command	Description
ESC	Exit	Leaves a sub-menu to return to the previous menu OR exits the BIOS setup while saving changes.
F2/F3	Change Color	Changes the background color of the BIOS Setting Utility.
F10	Save and Exit	Saves changes and reboots the notebook.
<Tab>	Select a field	Selects the next field.
↑	Select an item	Selects the next upper item.
↓	Select an item	Selects the next lower item.
PgUp	Lower value	Selects the next value within a field.
PgDn	Higher value	Selects the next value within a field.

Modifying the BIOS Settings

The AMIBIOS setup main menu is subdivided into sub-menus. Each menu item is decribed in this section.

The Setup Main Menu

AMIBIOS HIFLEX SETUP UTILITY VERSION x.xx (c) 2001 AMERICAN MEGATRENDS, INC. ALL RIGHTS RESERVED			
STANDARD CMOS SETUP ADVANCED CMOS SETUP POWER MANAGEMENT SETUP AUTO-DETECT HARD DISK CHANGE USER PASSWORD CHANGE SUPERVISOR PASSWORD DEFAULT SETTINGS SAVE SETTINGS AND EXIT EXIT WITHOUT SAVING			
Esc: Exit	↑ ↓: Sel	F2/F3: Color	F10: Save & Exit

Standard CMOS Setup

Under this menu, you may change time, date, hard disk drive type, etc.

Item	Selections / Sub-menu	Description
Date	N/A	Type in the current date, in MM/DD/YY format.
Time	N/A	Type in the current date, in HH:MM:SS format.
Pri Master	Auto CDROM Not Installed User	Primary Master is where BIOS tries to boot from first. The primary master controls the hard drive. Normally, Auto is selected.
Pri Slave		
Sec Master		The secondary master controls the CD-ROM drive. Normally, Auto is selected.
Sec Slave		
Boot Sector Virus Pro-tection	Disabled Enabled	To enable or disable the boot sector protection. When Enabled, BIOS gives a warning when any program attempts to rewrite or delete the boot sector.

About Boot Sector Virus Protection:

If enabled, the following warning message appears when a program attempts to alter the boot sector. You may have to enter "N" several times to prevent the boot sector write.

Boot Sector Write!!!
Possible VIRUS:Continue (Y/N)? _

The following warning message appears when a program attempts to format the hard disk drive.

Format!!!
Possible VIRUS:Continue (Y/N)? _

About Hard Disk Drive Setting

Select Auto to let BIOS configure the drive parameters automatically. Only for certain old types of hard disk drive will you need to modify the settings. After press `Enter`, BIOS display the drive parameters. If the dectected drive paramters are not correct or if you're trying to enable the enhanced IDE feature, you may still change the value manually.

Note: AMIBIOS automatically sets IDE drive parameters. If you set it to "USER", you will need to manually enter the MFM, ESDI, or DLL drive parameters. Select "Not Installed" for SCSI Drive. Choose "CDROM" option for ATAPI CD-ROM drive.

- 32 Bit Mode:
  Select `On` to allow data tranmission in 32 bit format.
- PIO Mode:
  Normally use "Auto" to let BIOS decide the PIO mode setting. If the selected PIO mode is not supported by the IDE drive, the hard disk drive may not work properly.

About Hard Drive Parameters

Parameter	Description
Type	The number for a drive with certain identification parameters.
Cyln	The number of cylinders in the disk drive.
Heads	The number of heads.
WPcom	The actual physical size of a sector gets progressively smaller as the track diameter diminishes. This parameter is the number of cylinders on the disk surface where write pre-compensation begins.
Sec	The number of sectors per cylinder. MFM drives have 17 sectors per cylinder. RLL drives have 26 sectors per cylinder. ESDI drives have 34 sectors per cylinder. SCSI and IDE drives have even more sectors per cylinder.

Advanced CMOS Setup

If you select USB FDD, you will need to purchase an optional USB FDD device and attach it to the system before booting..

Item	Selections / Sub-menu	Description
1st Boot Device	Disabled IDE-0 CDROM USB FDD Intel UNDI	Set the type of device for the 1st drive / network BIOS attempts to boot from. (Note: IDE-0 is the hard disk drive.)
2nd Boot Device		Set the type of device for the 2nd drive BIOS attempts to boot from.
3rd Boot Device		Set the type of device for the 3rd drive BIOS attempts to boot from.
Boot Up NumLock	On Off	Turn the embedded numeric keys on or off as system boots up.
TouchPad Support	Disabled Enabled	Set whether supporting Touch Pad and Mouse at the same time.
Password Check	Setup Always	[Setup]: To enable the password check function every time when BIOS Setup is executed. [Always]: To enable the password check function every time the system boots.
Share Memory Size	8 / 16 / 32 / 64 MB	This option allows user to define the amount of system memory to be used as display memory or buffer. Share memory size may be set up to 50% of the total system memory size or up to 64MB.
TV Display Type	NTSC PAL	Select NTSC if it is the standard used in your country; otherwise, select PAL.

This notebook employs Share Memory architecture, which means the graphic engine use a portion of the system memory as display memory. The more system memory is allocated for display use, the less memory is available for the system use. For example, if 8MB out of total system memory of 64MB was set as VGA shared memory, the system would only show 56MB during the Power-On Self Test (POST).

Power Management Setup

Item	Selections / Sub-menu	Description
Intel SpeedStep Technology	Performance Battery Auto	[Performance]: Set CPU to the highest frequency. [Battery]: Set CPU to lower frequency to conserve power. [Auto]: The system will adjust CPU performance according to processor loading.
Power Management	Disabled Enabled	To disable or enable the BIOS power management function.
Suspend Mode	Disabled Dram Disk	[Disabled]: System will stay on at all times. [Dram]: Power On Suspend mode. The system will save its state to DRAM and enter Standby suspend mode. [Disk]: Save To Disk Suspend mode. The system will save its state to hard disk and power off.

Note:
The Suspend Mode selection in BIOS only applies to older Windows version (such as Windows 3.1 or Windows 95 or NT4) or non-Windows operating system. In Windows ME / 98 /2000 /XP, suspend mode and settings are determined by settings in the Power Options / Management Properties (Start > Control Panel > Power Options).

Using Password Protection

Two Levels of Password Protection

This BIOS provides both a Supervisor and a User password. If you try to activate both passwords, the Supervisor password must be set first.

The passwords activate two different levels of protection security:

1. System always asks for password every time it is powered on.
2. System asks for password only when you attempt to enter BIOS utility.

   Have the Password Check item set in Advanced CMOS Setup Menu (See previous section *Advanced CMOS Setup*). The passwords are encrypted and stored in NVRAM. Make sure you write them down or memorize them. If you lost the passwords, the notebook may need to be sent back to the factory or to an authorized service dealer.

Auto-Detect Hard Disk

When selecting this option, AMIBIOS will automatically detect the hard disk drive parameters. The Standard CMOS Setup menu shows the drive parameters.

Defualt Settings

When selecting this option, all values in the BIOS will be reverted back to the factory`s original (default) settings.

Save Settings And Exit

After you have completed the BIOS settings, select this item to save all settings, exit BIOS Setup utility, and reboot. New system settings will take effect on next power up.

Exit Without Saving

Select this item if you intend to exit the BIOS Setup utility without making any changes to the current settings.

SECTION 3

BATTERY POWER AND POWER MANAGEMENT

In this section, you will learn the fundamentals of power management and how to use it to achieve longer battery life.

In this section, you will learn how to operate your notebook on battery power, how to handle and maintain the battery pack, and learn about the system`s power saving features.

TFT display, central processor, hard disk drive are the major hardware subsystems that consume the most power. Power management deals with how these key components should behave to conserve power. For example, you can have the system turn off its display after 2 minutes of inactivity to save power. Efficient power management can help you work longer sessions before having to recharge the battery.

The Battery Pack

Note: Make sure the battery is fully charged before first-time use.

Note: In the Standby Suspend mode, a fully charged battery loses its power in roughly 1/2 ~ 1 day. When not being used, the battery`s power will deplete in 1-2 month.

Note: Do not touch the metal ends of the battery connector to avoid rusting.

When the notebook operates on battery power, the Battery LED indicator will be on.

Lithium-Ion Battery

Your notebook uses a removeable eight-cell Lithium-Ion battery pack that provides power when you don`t have access to an AC outlet.

Battery Warning

1. Low Battery Warning
Low battery condition occurs when battery power is reduced to 6%. The green power LED indicator blinks and the system beeps once every 16 seconds.

Warning:
Do not expose battery packs to temperatures below 0 degree Celsius (32 degree F) or above 60 degree C (140F). This may adversely affect the battery pack.

2. Very Low Battery Warning
Very Low battery condition occurs at 3 % power remaining. The power LED indicator blinks and the system beeps at 4-second interval.

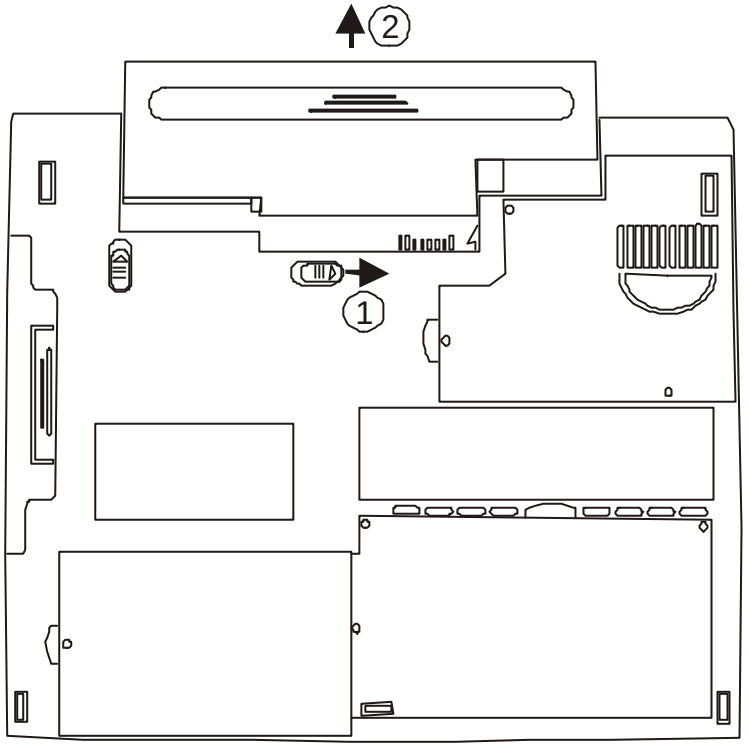
When the notebook warns you of its low battery condition, you will have about 5-10 minutes to save your current work.

Note:
You may use Fn+F3 function keys to disable battery warning beeps.

Installing and Removing the Battery Pack

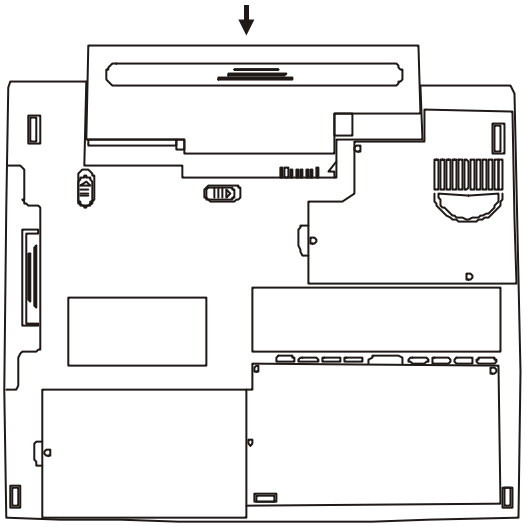
To Remove the Battery Pack:

1. Place the notebook bottom-side up on a flat and secured surface.
2. Locate the battery latch. Pull the latch toward the direction shown by the arrow and hold.
3. Pull out the battery`s module hard case toward direction shown.



To Install the Battery Pack:

1. Place the notebook bottom-side up on a flat and secured surface.
2. Carefully Insert the battery pack into the battery compartment of the unit until it is even with the edge of the notebook and the latch locks in place.



Charging the Battery and Charging Time

To charge the battery, while the battery pack is in the notebook, plug the AC adapter into the notebook and an electrical outlet.

The charge time is approximately 3 hours when the notebook is turned off and approximately 6 hours when the notebook is turned on.

If your notebook is plug into an AC outlet, the battery will still be trickle-charged even when the notebook is in operation. Charging an empty battery pack in the trickle-charge mode will take about 6 hours to attain full charge.

Note:
Be sure to reserve adequate time for charging before travelling.

When the battery is fully charged, the battery charge indicator becomes dark (off).

Checking the Battery Level

You can check the remaining battery power in the Windows battery status indicator, which is located at the lower right-hand corner of the task bar.

Alternatively, you can access the power meter by clicking the Power Options icon in the Windows Control Panel.

Prolonging the Battery's Life and Usage Cycles

There are ways you can do to prolong the use of battery.

- Use the AC adapter wherever AC wall outlet is available. This will ensure uninterrupted computing.
- Purchase additional battery pack.
- Store the battery pack in room temperature. Higher temperature tends to deplete the battery's power faster.
- Make good use of the power management function. Save To Disk saves the most energy by storing current system contents in a hard disk space reserved for this function.
- Disable the parallel and serial ports if no devices are attached to these ports. See section 2 for details of how this is done.
- Even when PC card is not operating, it still draws a small amount of power. Eject the PC card from the card slot when not in use.
- The life expectancy of the battery is approximately 500 recharges.
- See the notices section in the beginning of the user manual on how to care for the battery pack.

Note: Read Section Protecting Your Notebook in the beginning of this manual for tips about how to maintain the battery pack.

Using Windows Power Options

Note: When running on battery, try to refrain from opening too many applications at once.

In the Windows Power Options Properties [Start > Settings > Control Panel > Power Options] dialogue box, you may enter time-out values for display and hard disk drive. Windows power manager saves power by turning off hard drive after 1 minute of inactivities, for example. The following section will describe how to make use of the power saving feature.

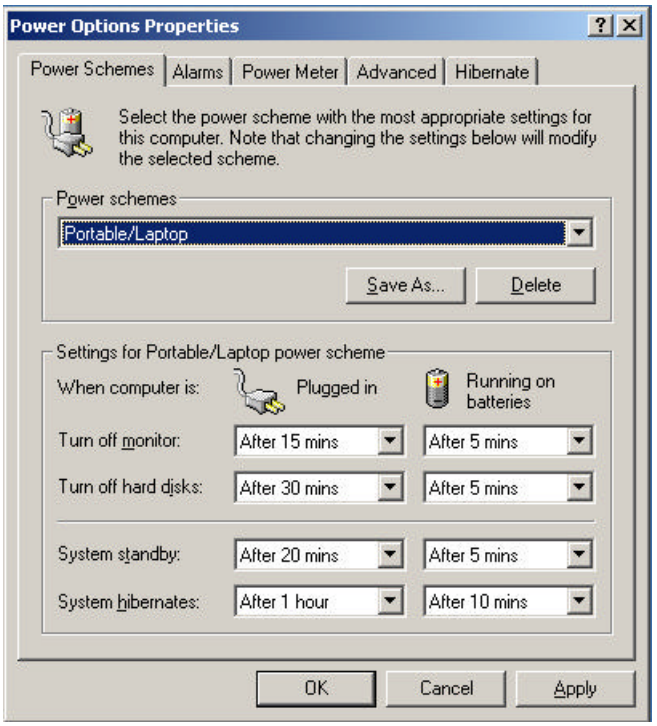
Power Schemes

Go to [Start > Settings > Control Panel] and double-click on Power Options icon.

In this dialog box, you can manually set the LCD and hard drive`s time-out values in the Plugged in column and in the Running on batteries column. Lower time-out values will save more battery power.

Note: Also consult Windows user guide for more information on how to use Windows power manage-ment functions.

Note: Actual dialogue box in different Windows O/S may appear slightly different.



Suspend Mode

Standby Suspend

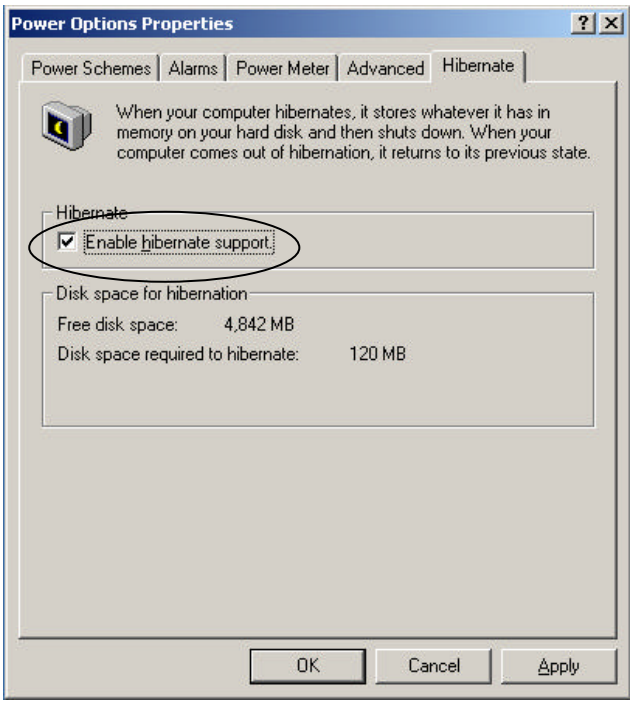
The system automatically enters this mode after a period of inactivity, which is set in the Power Schemes dialog box. In Standby mode, hardware devices, such as display panel and hard disk, are turned off to conserve energy.

Note:
Do not install or remove the memory module when the system is in the suspend mode.

Hibernate Suspend

In this mode, all system data are saved in the hard disk before powering down. When this mode is activated, all system state and contents are saved to the hard disk drive after a period of inactivity defined by the user. No power or very little power is drawn from the battery module under this mode.
However, depending on how much RAM that have been installed on your computer, the amount of time the system requires to restore all its previous contents can range from 5 to 20 seconds.
For Windows ME / 2000 / XP users, hibernation is handled by the operating system; therefore, no special disk partition or disk file is necessary.
If you wish to activate Hibernate mode, you need enable Hibernate Support in the Hibernate tab of the Power Options manu.

Note:
Actual dialogue box may appear slightly different.

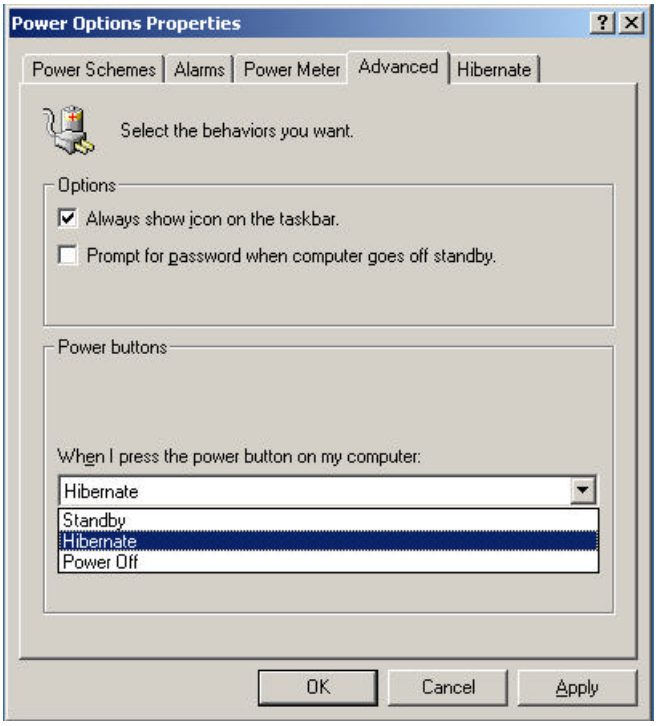

Power Options Properties
Power Schemes
Alarms
Power Meter
Advanced
Hibernate
When your computer hibernates, it stores whatever it has in memory on your hard disk and then shuts down. When your computer comes out of hibernation, it returns to its previous state.
Hibernate
Enable hibernate support
Disk space for hibernation
Free disk space: 4,842 MB
Disk space required to hibernate: 120 MB
OK
Cancel
Apply

Power Button Action

The notebook PC`s power button can be set to turn off the system or activate the suspend mode.

Go to [Start > Settings > Control Panel > Power Options] and click on the Advanced tab. In the pull-down manu, select how you wish the power button to work as.

Note: Actual dialogue box may appear slightly different.



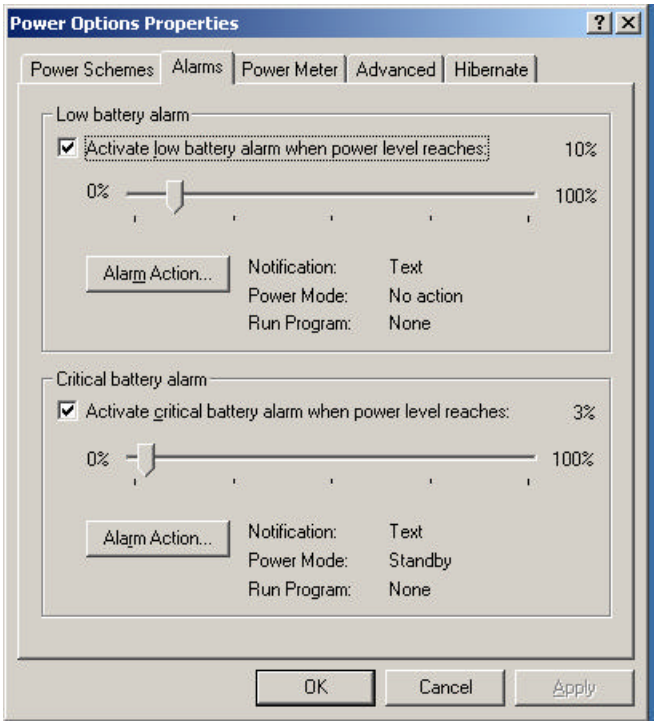
Low Battery Warning

You can define when and how the system warns you of its battery-low condition.

Note: Consult Windows user guide for more information on how to use Windows power management functions.

Go to the Alarms tab in the Power Options Properties box. If you wish to hear audible beeps, click on the Alarm Action button and put a check on Sound Alarm.

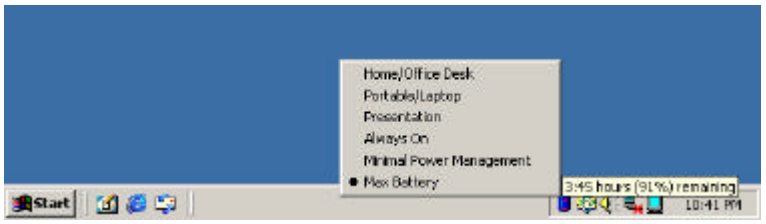
Note: Actual dialogue box may appear slightly different.



Power Manu Quick Access

In stead of making specific selections in the Power Options Properties box, you can quickly and easily specify which pre-set power saving function you desire by clicking on the Battery icon at the lower right-hand corner of the task bar. (If you do not see a battery or AC-in icon, go to Power Options Properties box and click on the Advanced tab. Check off ``Always show icon on the task bar``.) Select Max Battery if you want the system to enter suspend mode more often. Or, select Always On if your note-book PC is plugged into an AC power source.

Note:
Actual Windows menu box may appearslightly different.



SECTION 4

UPGRADING YOUR NOTEBOOK PC

In this section, you will learn how to upgrade the DRAM, hard disk drive capacity, and to install the optional wireless LAN mini PCI card.

Upgrading the System Memory

Many applications will generally run faster when the notebook's memory capacity is increased. The notebook provides two expansion sockets, located on bottom side of the notebook. One of the sockets may have already been occupied by a memory module pre-installed by your dealer or at the factory. You can increase the amount of memory by adding a dual inline memory module (commonly known as DIMM.) The DIMM can be 128MB, 256MB or 512MB in capacity. The DIMM is of type DDR 266/200 SDRAM. It has 200 pins and is intended for notebook`s use and should be PC2100 compliant.

Warning: Memory upgrade in this notebook is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure is NOT covered by the manufacture's warranty.

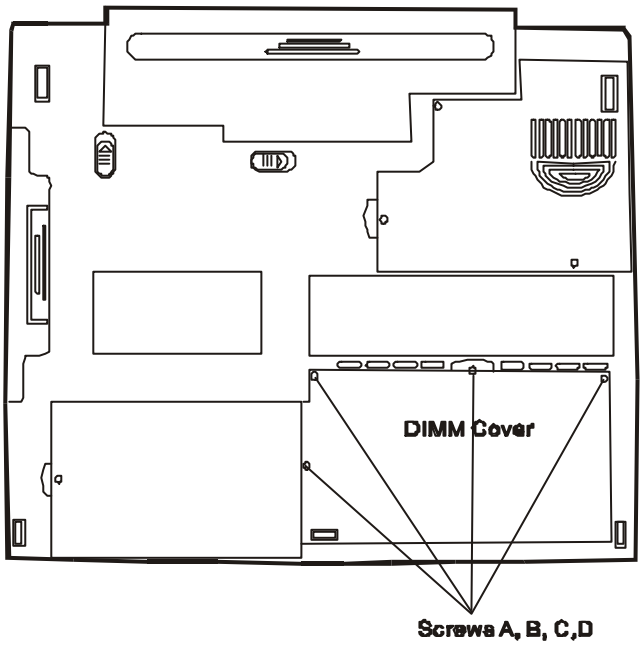
Warning: Changing memory while your computer is in suspend or power-saving mode may cause permanent damage to the notebook. Make sure you turn off the power and unplug the AC cord before proceeding with a memory upgrade.

Installing a memory module (DIMM) into the system

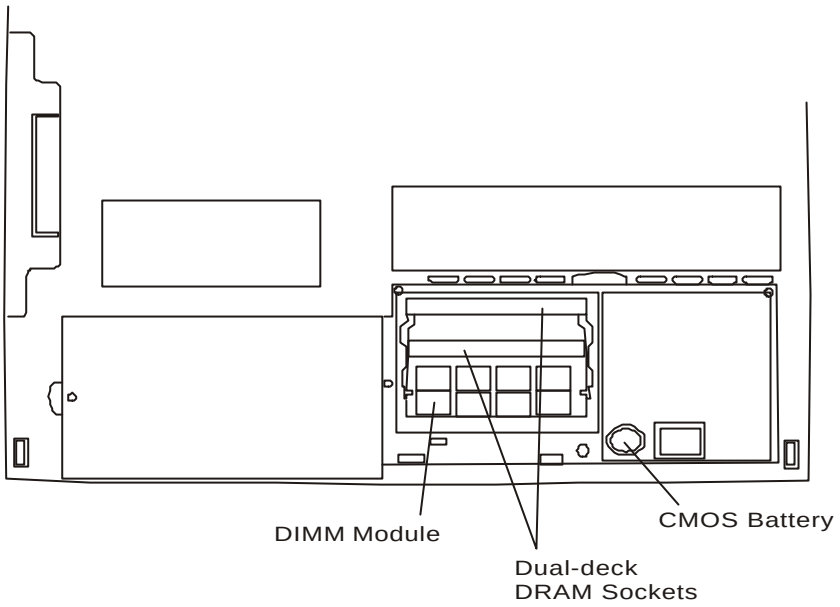
Warning: To avoid damaging the DIMM, do not touch its metal contact edge to avid the electro-static damage from static electricity.

To install the DIMM, do the following:

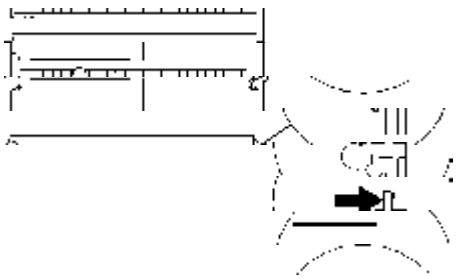
1. Power OFF the notebook. Unplug the AC cord and all cables/devices attached to the notebook and remove the battery pack.
2. Place your hand on a large metal object momentarily to discharge any static electricity.
3. Place the notebook on a flat surface and fully open the LCD lid.
4. Find Screws A, B, C and D on the bottom side. The screws may be different, so note their positions.



5. The DIMM sockets are now revealed as shown below.

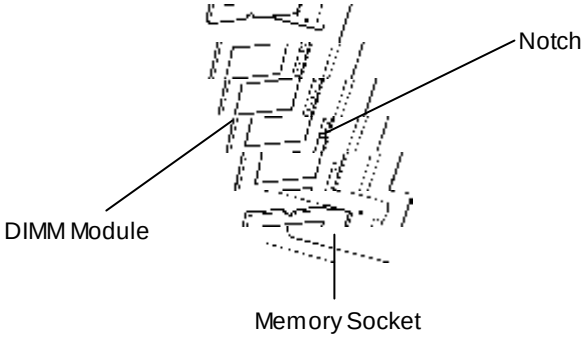


6. If you want to remove an existing DIMM from the socket, press out on the latches located on both edges of the socket at the same time. The DIMM should pop up to an angle of 30 degree (see diagram below.). Pull the DIMM module out of the memory socket. Store away the DIMM for the future use.



7. Install the new DIMM module into the one of the empty memory sockets. The DIMM will only fit in one orientation. Insert the DIMM at an angle of approximately 30 degrees into the empty memory socket. Then press it firmly so that the contact edge is driven into the receiving socket.

Note:
Notice the notches on the DIMM. The notches should fit nicely with the socket.



8. Pivot the DIMM downward until the latches on both sides of the socket snap into place. You will hear a click when this is done correctly.

9. Replace the metal DIMM cover and Screws A, B, and C.

Note:
Your notebook has been tested with a wide range of DIMM on the market. However, not all memory modules are compatible. Check with your notebook vendor for a list of compatible DIMM for your notebook.

You have just completed the memory upgrade. When you boot up the notebook, you should expect to see an increase in DRAM capacity.

Upgrading the Hard Disk Drive

Note: Certain models that come with the IBM-brand hard drive emit a clattering sound when it is being rattled. This is a normal condition.

Replacing the original drive with one of larger capacity can increase the hard drive capacity of your notebook. The notebook uses a 9.5 mm (hight), 2.5-inch Enhanced IDE, Ultra DMA 66/ 100 type hard disk.

Be sure to make a backup copy of all your data before attempting this operation.

Warning: Hard drive upgrade in this notebook is a delicate process. Please observe the following instructions carefully or have a qualified technician install it for you. Damages due to mishandling of this procedure is NOT covered by the manufacture`s warranty.

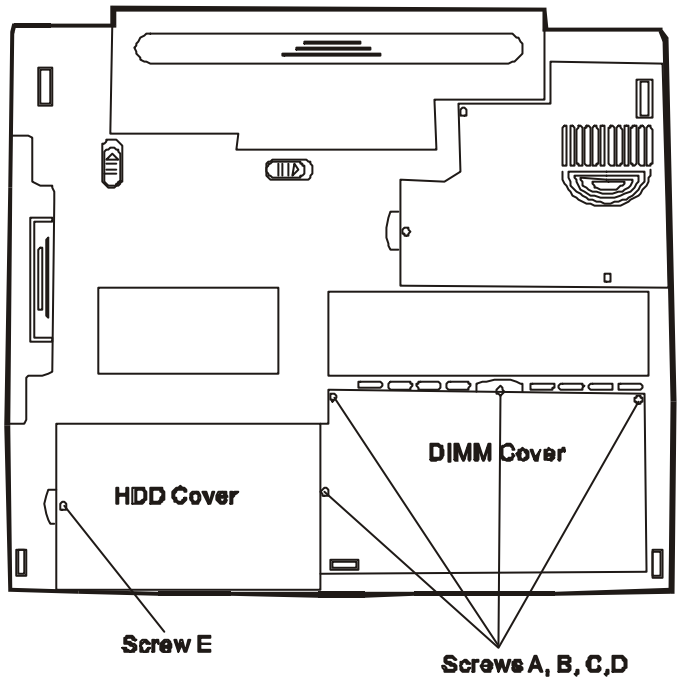
Warning: Apply care when handling the hard disk.

- Do not drop or apply any shock.
- Do not press on the cover.
- Do not touch the connector with your fingertips.
- Mishandling of the hard drive can result in permanent loss of data. Make a backup copy of the drive s content before you remove it.

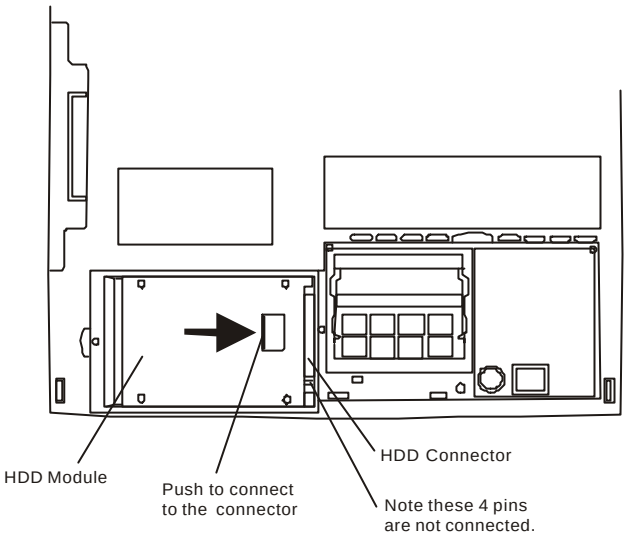
Upgrading the Hard Disk Drive

To replace the hard disk drive, do the following:

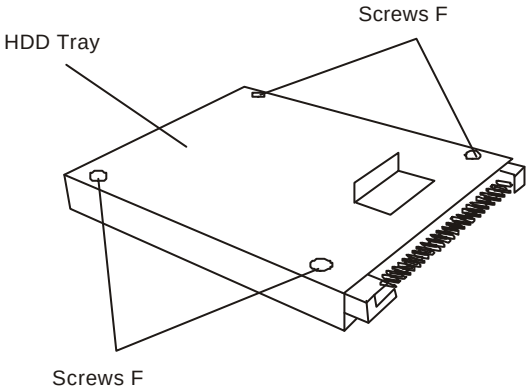
1. Turn OFF the computer. Unhook the AC cord and all cables/devices attached to the notebook.
2. Place your hand on a large metal object momentarily to discharge any static electricity.
3. Locate the hard disk drive cover on the bottom of the notebook.
4. Unscrew Screw A, B, C, D and remove the DIMM Cover. And then remove Screw E and remove the HDD Cover.



5. Push the hard disk drive module toward the direction shown by the arrow. This will allow the HDD module to disconnect from the HDD Connector. Once disconnected, lift the module away from the bay.

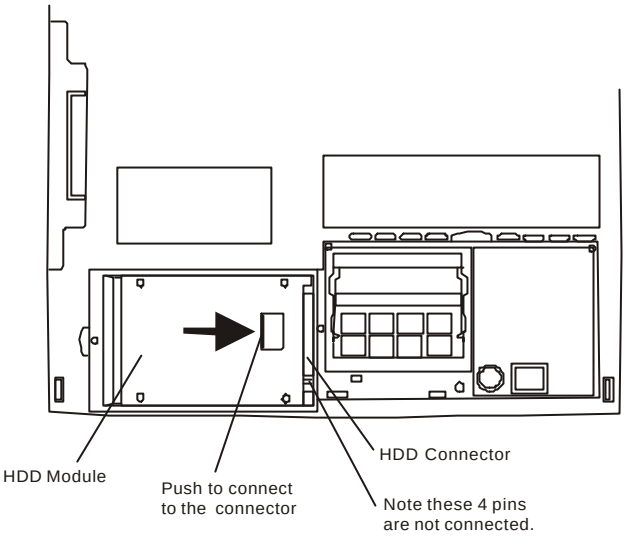


6. Locate and remove 4 Screws F.



7. Remove the old HDD from the Tray and replace with the new drive. Note the green PC board of the hard disk drive is facing against the metal cover.

8. Re-attach Screws F.
9. Place HDD module into HDD bay and push it toward the direction shown by the arrow. Make sure the connection is firm.



10. Replace HDD Cover and DIMM Cover and replace Screws A, B, C, D and E.

You have now completed the hard drive upgrade. When you boot up the notebook PC, you may need to create a primary HDD partition and reformat the new drive and re-install O/S, drivers, and all the necessary applications.

SECTION 5

TROUBLE SHOOTING

In this section, you will learn how to solve common hardware and software problems.

Your notebook has been fully tested and complies with the system specifications before shipping. However, incorrect operations and/or mishandling during shipment may cause problems.

This section provides a reference for identifying and correcting common hardware and software problems that you may encounter.

When you encounter a problem, you should first try to go through the recommendations in this section. Instead of returning the notebook and waiting for repair, you may easily solve the problems by considering the following problems and possible solutions. If the error continues, contact your reseller for service information.

Before taking further actions, consider the following suggestions:

- Check to see if the problem persists when all the external devices are removed.
- Check to see that the green light indicator on the AC adapter is lit.
- Check to see the power cord is properly plugged to the wall outlet and to the notebook.
- Check to see the power indicator of the notebook is on.
- Check the brightness control on the keyboard if the LCD display appears dim.
- Check to see if your keyboard is operational by pressing and holding any key. An audible beep indicates the keyboard is functioning correctly.
- Check for any incorrect or loose cable connections. Make sure the latches on the connectors latch securely on to the receptor end.

- Be sure you have not performed an incorrect setting on the hardware devices in the BIOS Setup utility. A faulty setting may cause the system to misbehave. If you are not sure of the changes you made, try to restore all the settings to factory defaults.
- Be sure all the device drivers are installed properly. For example, without the audio driver properly installed, the speakers and microphone will not work.
- If external devices such as USB camera, scanner, SCSI card do not function correctly when connected to the system, it is usually the device`s own problem. Consult the device`s manufacturer first.
- Some software programs, which have not gone through rigorous coding and testing, may cause problems during your routine use. Consult the software vendor for problem solving.
- Not all peripheral are plug-and-play capable. You need to restart the system with these devices powered up and connected first.
- Be sure to go to BIOS SETUP and load DEFAULT SETTING after any BIOS updated.

Audio Problems

No speaker output -

- Software volume control is turned down in Microsoft Sound System. Double-click the speaker icon on the lower right corner of the taskbar to see if the speaker has been muted.
- Press Fn+F5 Up increase the volume.
- Turn up the volume dial located at the front edge of the notebook. See Section 1 for its location.
- Most audio problems are software-related. If your notebook worked before, chances are software may have been set incorrectly.
- Go to [Start > Settings > Control Panel] and double-click the Multimedia icon (or Sounds and Audio Device Property icon). In the Audio page, make sure that SiS 7018 Wave Wave is the preferred playback device.

Sound can not be recorded -

- Double-click the speaker icon on the lower right corner of the taskbar to see if the microphone has been muted.
  1. Click Options and select Properties.
  2. Select Recording and click the OK button.
  3. After Click OK button, the recording volume control panel will appear.
- Go to [Start > Settings > Control Panel] and double-click the Multimedia icon (or Sounds and Audio Device Property icon). In the Audio page, make sure that SiS 7018 Wave is the preferred recording device.

Hard Disk Problems

The hard disk drive does not work or is not recognizable -

- If you had just performed a hard disk upgrade, make sure the hard drive connector is not loose and the hard disk drive is also correctly seated. Remove it and reinsert it firmly, and restart your PC. (Refer to Section 4 for details.)
- The new HDD may need to be partitioned and reformatted. O/S and drivers will need to be re-installed as well.
- Check the hard disk indicator LED. When you access a file, the LED lamp should light up momentarily.
- The new HDD may be defective.
- If your notebook has been subjected to static electricity or physical shock, you may damaged the disk drive.

The hard drive is making abnormal whining noises -

- You should back up your files as soon as possible.
- Make sure the source of noise is indeed from the hard drive and not the fan or other devices.

The hard disk drive has reached its capacity -

- Run Disk Cleanup utility in Windows. [Start > Programs > Accessories > System Tools > Disk Cleanup] The system will prompt you for what to do.
- Archive files or programs that you had no longer used by moving them to an alternative storage medium (floppy disk, optical recordable disk, etc.) or uninstall programs that no longer use.
- Many browsers store files in the hard drive as a cache to speed up the performance. Check the program's Online Help for instructions on decreasing the cache size or on removing temporary Internet files.
- Empty the Recycle Bin to create more disk space. When you delete files, Windows saves them to the Recycle Bin.

The hard disk takes longer to read a file -

- If you have been using the drive for a period, the files may be fragmented. Go to [Start > Programs > Accessories > System Tools > Disk Defragmenter] to perform a disk defragment. This operation may take a while.

The files are corrupted -

- Run the Error-checking utility in Windows to check the HDD. Double-click My Computer. Right-click C: and select Properties. Click Check Now in Error-checking in Tools.

CD-ROM or DVD-ROM Problems

The CD-ROM or DVD-ROM drive does not work -

- Try rebooting the system.
- The disk is damaged or files are not readable.
- After you have inserted a CD-ROM disk, it may take a moment before you can access its content.

The drive dose not read any disks -

- The CD may not be properly seated in the tray. Make surethe disk is firmly seated onto the spindle.
- The disk is damaged or not readable.

The disk can not be ejected -

- Normally, it takes a few seconds to eject the disk.
- If the disk can not be ejected, it may be mechanically jammed. Straighten out a paper clip and insert it to a tiny hole next to the eject button. This should reject the disk tray. If not, return the unit for repair. Do not forcefully pull on the disk tray.

Display Problems

The display panel is blank when the system is turned on -

- Make sure the notebook is not in the Standby or Hibernate suspend modes. The display is turned off to conserve energy in these modes.
- Press Fn+F7 to increase the screen brightness.
- Press Fn+F4 to make sure the notebook is not in the CRT-output only mode.

The screen is difficult to read -

- Press Fn+F7 to increase the screen brightness.
- The display resolution should at least be set to 1024x768 for optimal viewing.
  1. Go to [Start > Settings > Control Panel] and double-click on the Display icon.
  2. Under the Settings page, set screen resolution to 1024x768 and choose at least 256 colors.

The screen flickers -

- It is normal if the display flickers a few times during shutting down or powering up.

Keyboard and Pointing Device (Mouse) Problems

The built-in keyboard accepts no input -

- This notebook is designed to use only one keyboard at once time. If you are connecting an external keyboard to the system, the built-in keyboard may not work.
- Try restarting the system.

The built-in touch pad does not work -

- Make sure the internal PS/2 port (pointing device) is enabled (or set to Auto Detect) in the BIOS Setup. Go to Section 2 *BIOS Setup* for details on how to enable the PS/2 mouse.

The built-in touch pad performs eratically -

- Make sure there is no excess perspiration or humidity on your hand when using the touch pad. Keep the surface of the touch pad clean and dry.
- Do not rest your palm or wrist on the surface of the touch pad while typing or using the touch pad.

The characters on the screen repeat while I type.

- You may be holding the keys down too long while you`re typing.
- Keep the keyboard clean. Dust and dirt under the keys could cause them to stick.
- Configure the keyboard to wait longer before the auto repeat feature starts. To adjust this feature, Go to [Start > Settings > Control Panel], and double-click on the Keyboard icon. A dialogue box shows up with the adjustable settings for the keyboard.

CMOS Problem

A message "CMOS Checksum Failure" displays during the booting process -

- Try to reboot the system.
- If the message "CMOS Checksum Failure" appears during the booting procedure, it may indicate failure of the CMOS battery. If so, you need to replace the battery. This battery noramlly lasts one to two years on continuous operation. However, for a typical user, the battery lasts three to five years. The battery is of type ML1220 (3V). You may replace it by yourself. The battery is located nearby the DIMM Socket. See Section 4 on how to remove the DIMM cover. If you are not sure how this is done, return the notebook to the dealer.

Memory Problems

The POST does not show an increased memory capacity when you have already installed additional memory -

- Certain brands of memory module may not be compatible with your system. You should ask your vendor for a list of compatible DIMM.
- The memory module may not be installed properly. Go back to Section 4 to review the details of this operation.
- The memory module may be defective.
- This system`s graphic engine shares a portion of the system`s DRAM as its frame buffer. How much is being shared depends on the setting in the BIOS setup. Go to Section 2 for details.

The O/S issues an insufficient memory error message during operation -

- This is often a software or Windows-related problem.
- Close the application programs you`re not using and restart the system.
- Otherwise, you have to install additional memory module. **For instructions, go to Section 4** *Upgrading Your Notebook*.

Modem Problems

The built-in modem does not respond -

- Make sure the modem driver is loaded properly.
  Go to [Start > Settings > Control Panel > Modem Settings] and go to Modem Helper. Make sure SmartLink 56K Voice Modem or Uniwill V.90 Modem is listed. Otherwise, click the Add button to add the modem drive, which is located in the factory CD-ROM (or floppy diskette).
- Go to [Start > Settings > Control Panel > System] and click Device Manager button in the Hardware page to check for possible resource or driver conflict. See Windows on-line help or manual for how to handle such problems.
- Make sure the phone line the notebook is connected to is working.

Connection difficulties -

- Be sure to disable Call Waiting.
- Be sure to have the correct country setting where your notebook is used. [Start > Settings > Control Panel > Modem Settings > Configuration] In the Country pull-down manual, select the appropriate country setting.
- Excessive line noise might cause the connection to be dropped. To check this, put the regular phone handset on the line and placing a phone call. If you do hear abnormal noise, try to make the modem connection with a different line or contact your local telephony company for service.
- Make sure the RJ-11 cable (the one that goes from the modem to the telephone line) is firmly connected to the modem's RJ-11 jack and the telephone line socket.
- Check the serial port settings. Make sure the hardware and software are referring to the same COM port.
- Try a different receiver number and see if the problem persists.
- Be sure the line has a dial tone.

Network Adapter Problems

The Ethernet adapter does not work –

- Go to [Start > Settings > Control Panel > System > Hardware > Device Manager]. Double-click on Network Adapters and check if SiS 900 PCI Fast Ethernet Adapter appears as one of the adapters. If it does not exist, Windows has not detected the SiS Ethernet adapter or the device driver has not been installed properly. If there is a yellow mark or red cross on the SiS network adapter, there may be a device or resource conflict. Replace / update the device driver from the factory CD-ROM disk or consult Windows manual on how to solve this problem.
- Make sure the physical connections on both ends of the cable are good.
- The hub or concentrator may not be working properly. Check to see if other workstations connected to the same hub or concentrator are working.

The Ethernet adapter does not appear to operate in the 100Mbps transmission mode –

- Make sure the hub you are using supports 100Mbps operation.
- Make sure that your RJ-45 cable meets the 100Base-TX requirements.
- Make sure the Ethernet cable is connected to the hub's socket that supports 100Base-TX mode. The hub may have both 100Base-TX and 100Base-T sockets.

PC Card (PCMCIA) Problems

PC Cards do not function-

- Make sure you have properly installed the driver for the card.
- Consult the card`s manual or contact the vendor for trouble-shooting.

The PC card can not be recognized -

- Windows NT4.0 does not support PCMCIA (PC Card) function. You may need an external program for this.
- Make sure the card is fully inserted; the outer end of the card should be even with the edge of the notebook.
- Remove and insert the PC card again.
- Make sure there is no IRQ conflict with the card. See Windows on-line help for solving IRQ conflicts.
- Reboot the notebook and see if the problem persists.
- The card may be defective. Try the card on another system, if possible.

Windows crashes or freezes when you remove the PC card-

- Make sure you have <Stop> the PC card before removing it. Double-click the PC Card icon at the lower right corner of the task bar and select the card you wish to stop. When you click <OK>, in few seconds Windows will prompt you to remove the card.

Performance Problems

The notebook becomes hot -

- In a 35ºC environment, the notebook's bottom case is expected to reach 50 degrees.
- Make sure the air vents are not blocked.
- If the fan does not seem to be working at high temperature (50 degrees Celsius and up), contact the service center.
- Certain programs that are processor-intensive may increase the notebook temperature to a degree where the notebook automatically slows down its CPU clock to protect itself from thermal damage.

The program appears stopped or runs very slowly -

- Press CTRL+ALT+DEL to see if an application is still responding.
- Restart the notebook.
- This may be normal for Windows when it is processing other CPU-intensive programs in the background.

- You may be running too many applications. Try to close some applications or increase system memory for higher performance.
- The processor may have been overheated due to the system`s inability to regulate its internal heat. Make sure the notebook`s ventilation grills are not blocked.

Power, Start, and Battery Problems

The notebook powers down as soon as it is powered on -

- Battery power may be extremely low. The circuitry prevents a complete power drain, which is not intended for Lithium Ion batteries. Use the adapter to charge it for several hours before trying again.

The notebook beeps intermittently -

- When battery charge is low, an audible beep warns you. Press Fn+F3 to turn off the warning beep, if desired.

The battery life gets shorter and shorter -

- The battery has a finite life of about 500 charge cycles. If your battery is over one or two years old, it may be time to have it replaced.
- Try a higher power saving setting in the BIOS or in the Windows Power Management.

The battery does not charge -

- Make sure the AC adapter is plugged into a valid power source.
- The battery charge indicator LED on the notebook should be lit when you plug in the AC adapter.
- Make sure the battery module is fully inserted in its bay; make sure the battery latch is in locked position.
- If the battery is operating at a very high temperature, it may not charge.

Printing Problems

The printer does not print -

- Make sure the cable connection is secured and the printer is powered up.
- Run the printer self test to see if it reports any problem.
- Check if the printer displays any error messages. A paper jam may have occurred.
- Make sure you have already installed the printer driver.
- Most printer (using parallel or serial port) problems are software-related. Consult Windows on-line help or contact the printer vendor for assistance.
- Try rebooting the system with the printer powered up and connected first.

The printer does not print what`s on the screen -

- The information displayed on the screen may not exactly be the same as what is printed.
- If the printer print extra and strange symbols, it is the result of the cache (garbage) in the printer momery buffer. Cancel all the printer tasks and toggle off the printer power switch to clear up the momery buffer. Then, trun the printer back online and print again.
- Make sure you install the correct printer driver.

Firewire (IEEE1394) and USB Problems

The USB device does not work -

- Windows NT 4.0 does not support USB protocols
- Check the settings in the Windows Control Panel.
- Make sure you have installed the necessary device drivers.
- Contact the device vendor for additional support.

The IEEE1394 port does not work -

- Make sure the cable is fully connected.
- Make sure you have installed the necessary device drivers.
- Contact the device vendor for additional support.

APPENDIX A

PRODUCT SPECIFICATION

Processor and Core Logic

• *Processor*	Intel P4/ Celeron/ P4-M/ M-Celeron processor (Northwood Process), P4 @ 2A~2.66GHz, Intel Celeron @ 2.0~2.2GHz, Intel P4-M @ 1.4~2.4GHz and M-Celeron @ 1.4~2.4GHz, uFCPGA or uPGA package
• *L1 Cache*	32KB (16KB for Code Instruction, 16KB for Data) on-die
• *L2 Cache*	128 (Celeron)/ 256 (M-Celeron) /512KB (P4 and P4-M) on-die
• *Core logic*	SiS M650 + SiS 962 chipset with graphic, audio, modem, and Ethernet controller integrated
• *Bus Architecture*	400/533 MHz Front Side (Memory) Bus Integrated AGP, AGP v2.0 Compliant

System Memory

• *Memory Type*	DDR 266/200 SDRAM, PC2100 compatible
• *Defualt*	0 / 64MB / 128MB / 256MB / 512MB, 3.3-Volt, 64-bit
• *Memory Expanssion*	Two 200-pin DDR SO-DIMM sockets, up to 512MBx2

LCD

• *Display Panel*	14.1-inch XGA active-matrix TFT display with up to 16M colors

Graphic Engine

• *Graphic Corelogic*	SiSM650 with integrated AGP bus 2D / 3D graphics accelerator UltraAGPII graphics capability (similar to 4X AGP) 3D Graphics Supported
• *Playback*	Built-in DVD acceleration logic, MPEG2 decoding
• *Multimonitor Display*	Simultaneous LCD / External Monitor Display Multi-monitor LCD and External Monitor Display Supported
• *Memory Sharing*	Share-memory architecture with up to 50% of the total system memory and/or up to 64MB

Storage Capacity

• *Hard Disk*	2.5-inch format (9.5mm height) hard disk drive Ultra DMA 33/66/100

Audio

• *Audio Chipset*	SiS962 with integrated audio controller
• *Sound Capability*	64-voice Polyphony Wavetable Synthesizer DirectSound 3D accelerator Full duplex, independent sample rate converter SoundBlaster Pro/16 compatible AC'97 V2.1 compatible Full deplex and independent sample rate converter for audio recording and playback

Modem

• *Chipset*	SiS 962 with Modem Controller integrated
• *Transmission Speed*	V.90 / K56flex for download data speed up to 56000bps. V.34, V.17, V.29 protocol supported

LAN

• *Network Adapter*	SiS 962 with integrated PCI Fast Ethernet function for 100Base-TX network standards.
• *PnP Function*	Windows 98 / ME / 2000 / XP Plug and Play compatible
• *Flow Control*	Automatic Jam and auto-negotiation for flow control
• *Speed Seletion*	Auto Negotiation and Parallel detection for automatic speed selection (IEEE 802.3u)
• *Other Features*	High performance 32-bit PCI bus master architecture with integrated DMA controller for low CPU and bus utilization. Remote Wake-up Scheme supported Hot Insertion supported

Other Standard Hardware

• *CD-ROM*	5.25-inch format (12.7mm height) fixed module with 24X speed
• *CD-RW*	5.25-inch format (12.7mm height) fixed module (Optional)
• *DVD-ROM*	5.25-inch format (12.7mm height) fixed module (Optional)
• *Combo*	5.25-inch format (12.7mm height) fixed module (Optional)
• *Keyboard*	87 / 88-key touch-type QWERTY keyboard with embedded numeric keypad
• *Pointing Device*	Touch Pad with Page Up / Down buttons

PC Card

• *PCMCIA Controller*	O2Micro OZ 6912 controller Single slot for TYPE I/II
• *Features*	Hot insertion and removal supported

Ports

• *VGA Port*	One 15-pin CRT connector
• *Audio Port*	One stereo line-out jack & One microphone-in jack
• *1394 Port*	One IEEE1394 / Firewire mini-type connector
• *USB Port*	Three USB connectors
• *Modem Port*	One standard phone jack (RJ-11)
• *LAN Port*	One standard network connector (RJ-45)
• *Power Port*	One DC-in connector
• *PS/2 Port*	One 6-pin serial port

Power

• *Main Battery*	Li-Ion 8-cell @3.7V / 2000mAh, 59.2W
• *AC Adapter*	Input: 100~240V, 50~60Hz, 1.5A Max @ 115V Output: 20V, 3.5A, 70W/4.5A, 90W
• *Recharge (100%)*	System OFF: 3 HR (standard) System ON: 6 HR (standard)
• *Other Features*	Low Battery Warning Suspend / Resume capability

BIOS

• *PnP Function*	AMI PnP BIOS
• *Self Test*	Power On Self Test
• *Auto Detection*	DRAM auto-detection, auto-sizing L2 Cache auto-detection Hard disk type auto-detection
• *Power Management*	APM 1.2 (Advanced Power Management) & ACPI 2.0 (Advanced Configuration Power Interface) Smart Power®
• *Other Features*	32bit access, Ultra DMA, PIO5 Mode support Multi-boot capability

Operating System

• *O/S*	Microsoft Windows 95 / 98 / ME / 2000 / XP Microsoft NT 4.0

Phsical Specification

• *Weight*	305 (L) x 270 (W) x 25.4 (H) mm 5.5 lbs / 2.5KG
• *Environmental Limitations*	Operating Temperature: 5 to 35°C (41 to 95°F) Operating Humidity: 20 to 90 percent RH (5 to 35°C) Storage Temperature: -20 to 50°C (-4 to 122°F)

Optional Devices

USB FDD

DIMM module

Note: Product Specifications are subject to change without notice.

APPENDIX B

AGENCY REGULATORY NOTICES

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by the Manufacture may void the user's authority to operate the equipment.

Connections to Peripheral Devices

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.
Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22) Radio Frquency Interference
- EN50082 (IEC801-2, IEC801-3, IEC801-4) Electro-magnetic Immunity
- EN60950 (IEC950) Product Safety

Canadian Notice

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference

regulations of the Canadian Department of Communications.

Le present appareil numerique nemet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe B prescrites dans le reglement sur le brouillage radioelectrique edicte par le Ministere des Communications du Canada.

Power Cord Requirement

The power cord supplied with the notebook AC adapter should match the plug and voltage requirements for your local area. Regulatory approval for the AC adapter has been obtained using the power cord for the local area. However, if you travel to a different area and need to connect to a different outlet or voltage, you should use one of the power cords listed below. To purchase a power cord (including one for a country not listed below) or a replacement ac adapter, contact your local dealer.

U.S. and Canada

- The cord set must be UL-Listed and CSA-Certified.
- The minimum specifications for the flexible cord are (1) No. 18 AWG, (2) Type SJ, and (3) 3-conductor.
- The cord set must have a rated current capacity of at least 10 A.
- The attachment plug must be an earth-grounding type with a NEMA5-15P (15A, 125V) or NEMA6-15P (15 A, 250V) configuration.

Japan

- All components of the cord set (cord, connector, and plug) must bear a `T` mark and registration number in accordance with the Japanese Dentori Law.
- The minimum specification for the flexible cord are: (1) 0.75 mm^2 conductors, (2) Type VCT or VCTF, and (3) 3-conductor.
- The cord set must have minimum rated current capacity of 7 A.
- The attachment plug must be a two-pole, grounded type with a Japanese Industrial Standard C8303 (15 A, 125 VAC) configuration.

Other Countries

- The cord set fittings must bear the certification mark of the agency responsible for evaluation in a specific country. Acceptable agencies are:
  - BSI (UK)
  - OVE (Australia)
  - CEBEC (Belgium)
  - SEMKO (Sweden)
  - DEMKO (Denmark)
  - SETI (Finland)
  - EANSW (Australia)
  - SEV (Switzerland)
  - IMQ (Italy)
  - UTE (France)

KEMA (The Netherlands)
VDE (Germany)
NEMKO (Norway)
BSMI (Taiwan)
CCC (China)
PSB (Singapore)
PSE (Japan)

- The flexible cord must be of a HAR (harmonized) type HO5VV-F 3-conductor cord with a minimum conductor size of 0.03 square inches.
- The cord set must have a current capacity of at least 10 A and a nominal voltage rating of 125 / 250 VAC.

Battery Safety

- The battery pack is intended to use only with this notebook.
- Do not disassemble the pack.
- Do not dispose of the battery pack in fire or water.
- To avoid risk of fire, burns, or damage to your battery pack, do not allow a metal object to touch the battery contacts.
- Handle a damaged or leaking battery with extreme care. If you come in contact with the electrolyte, wash the exposed area with soap and water. If it contacts the eye, flush the eye with water for 15 minutes and seek medical attention.
- Do not charge the battery pack if the ambient temperature exceeds 45°C (113°F).
- To obtain a replacement battery, contact your local dealer.
- Do not expose the battery pack to high storage temperatures (above 60°C, 140°F).
- When discarding a battery pack, contact your local waste disposal provider regarding local restrictions on the disposal or recycling of batteries.
- Use only supplied AC adapter for charging.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer`s instructions or local laws.

VORSICHT! Explisionsgefahr bei unsachgernazen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ahnlichen Typ. Entsorgung gebrauchter Batterien navh Angaben des Herstellers.

CAUTION: MODEL N243S1 FOR USE WITH POWER SUPPLY MODEL LSE9901A2070
ATTENTION: MODEL N243S1, POUR UTILISER AVEC LE MODELE LSE9901A2070

Laser Safety

The optical drive used with this notebook are certified as a Class 1 laser device according to the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard and International Standards IEC 825 / IEC 825-1 (EN60825 / EN60825-1). The device is not considered harmful, but the following precautions are recommended:

- Do not open the unit.
- Avoid direct exposure to the laser beam.
- If the unit requires service, contact an authorized service center.
- Ensure proper use by reading and following the instructions carefully.
- Do not attempt to make any adjustment of the unit.

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASERSCHUTZKLASSE 1 PRODUKT

LED (Infrared) Safety

The infrared port located on the left side of this notebook is classified as a Class 1 LED (light-emitting diode) device according to International Standard IEC 825-1 (EN60825-1). This device is not considered harmful, but the following precautions are recommended:

- Do not attempt to view the infrared LED beam with any type of optical device.
- Do not attempt to make any adjustment of the unit.
- If the unit requires service, contact an authorized service center.
- Avoid direct eye exposure to the infrared LED beam. Be aware that the beam is invisible light and cannot be seen.

CLASS 1 LED PRODUCT
LEDSCHUTZKLASSE 1 PRODUKT

Warning! Do not attempt to disassemble the cabinet containing the laser. The laser beam used in this product is harmful to the eyes. The use of optical instruments, such as magnifying lenses, with this product increase the potential hazard to your eyes. For your safety, have this equipment serviced only by an authorized service provider.

CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
APPAREil A LASER DE CLASSE 1
EN60825-1

Lithium battery warning

This computer contains a lithium battery to power the clock and calendar circuitry.

CAUTION: Danger of explosion if battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ATTENTION: Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avcc unc batterie du méme type ou d'un type recommandé par le constructer. Mettre au rébut les batteries usagées conformément aux instructions du fabricant.

VORSICHT! Explosionsgefahr bei unsachgemäßen Austausch der Batterie Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

Der Arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 beträgt 70dB (A) oder weniger.

Zum Netzanschluâ dieses Gerätes ist eine geprûfte Leitung zu verwenden. Fûr einen Nennstrom bis 6A und einem Gerätegewicht größer 3kg ist eine Leitung nicht leichter als H05VV-F, 3G, 0.75mm^2 einzusetzen.

Die Steckdose muß nahe dem Gerät angebracht und leicht zugänglich sein.